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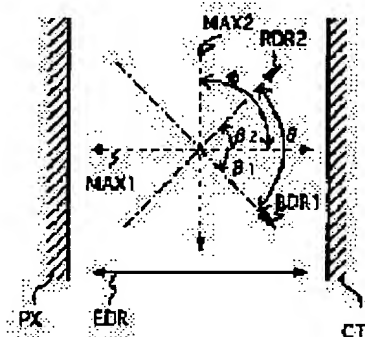
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## (54) ACTIVE MATRIX TYPE LIQUID CRYSTAL DISPLAY DEVICE

(57)Abstract:

PROBLEM TO BE SOLVED: To make it possible to embody the visual field angle equiv. to that of a cathode ray tube and to deal with animation images by specifying the initial orientation direction of the liquid crystal molecules of a liquid crystal layer at a specific angle with an electric field impression direction at the boundary on an upper substrate side and specifying this direction at a specific minus angle with the electric field impression direction at the boundary on a lower substrate side, thereby attaining the arrangement twisted at the specific angles at the time the voltage is not impressed.

SOLUTION: The oriented film on the lower substrate side is rubbed in a rubbing direction RDR1 and the oriented film in an upper direction is rubbed in a rubbing direction RDR2. The direction of a range of  $\geq -90$  to  $\leq 90^\circ$  is set as the initial orientation direction with respect to the intra-surface direction of a transverse electric field in either of the rubbing direction RDR and the direction reverse therefrom. Namely, the initial orientation angle  $\beta_1$  formed by the rubbing direction RDR1 of the oriented film on the lower substrate side and the impressed electric field direction EDR is set at  $-45^\circ$  and the initial orientation angle  $\beta_2$  formed by the rubbing direction RDR2 of the oriented film on the upper substrate side and the impressed electric field direction EDR is set at  $45^\circ$ . The arrangement twisted  $\theta$ ; at  $90^\circ$  between the upper and lower substrates is thus obtd. As a result, the wider visual field angle is obtd.



## LEGAL STATUS

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